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L25: Entry 2 of 2 File: USPT Jan 2, 2001

US-PAT-NO: 6169986
DOCUMENT-IDENTIFIER: US 6169986 B1

TITLE: System and method for refining search queries

DATE-ISSUED: January 2, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Bowman; Dwayne E.	Woodinville	WA		
Ortega; Ruben E.	Seattle	WA		
Hamrick; Michael L.	Seattle	WA		
Spiegel; Joel R.	Woodinville	WA		
Kohn; Timothy R.	Seattle	WA		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Amazon.com, Inc.	Seattle	WA			02

APPL-NO: 09/ 411441 [PALM]
DATE FILED: October 1, 1999

PARENT-CASE:
RELATED APPLICATION This application is a continuation of application Ser. No. 09/145,360 filed Sep. 1, 1998 now U.S. Pat. No. 6,006,225 claims the benefit of U.S. Provisional Application Ser. No. 60/089,244, filed Jun. 15, 1998, the disclosure of which is hereby incorporated by reference.

INT-CL: [07] G06 F 17/30

US-CL-ISSUED: 707/5; 707/2, 707/4, 707/10
US-CL-CURRENT: 707/5; 707/10, 707/2, 707/4

FIELD-OF-SEARCH: 707/5, 707/2, 707/10, 707/4

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected Search ALL Clear

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐	5675819	October 1997	Schuetze	704/10

☐	5721897	February 1998	Rubinstein	707/2
☐	5787422	July 1998	Tukey et al.	707/5
☐	5794233	August 1998	Rubinstein	707/4
☐	5864845	January 1999	Voorhees et al.	
☐	5865845	January 1999	Voorhees et al.	707/4.5
☐	5911140	June 1999	Tukey et al.	707/5
☐	5913215	June 1999	Rubinstein	707/10
☐	6006225	December 1999	Bowman et al.	707/5

OTHER PUBLICATIONS

Abstract of Generating Advanced Query Interfaces, Lee, Srivastava and Vista, Computer Networks and ISDN System Conference Title: Comput. Netw. ISDN Syst. (Netherlands) vol. 30, No. 1-7, pp. 656-657 (1998).
Abstract of Using Combination of Evidence for Term Expansion, Wilkinson, Information Retrieval Research, Proceedings of the 19.sup.th Annual BCS-IRSG Colloquium on IR Research (1997).
Abstract of Inquirus, the NECI Meta Search Engine, Lawrence and Giles, Computer Networks and ISDN Systems Conference Title: Comput. Netw. ISDN Syst. (Netherlands) vol. 30, No. 1-7, pp. 95-105 (1998).
Abstract of Facilitating Complex Web Queries Through Visual User Interfaces and Query Relaxation , Li and Shim, Computer Networks and ISDN Systems Conference Title: Comput. Netw. ISDN Syst. (Netherlands) vol. 30, No. 1-7, pp. 149-159 (1998).

A User-centred Evaluation of Ranking Algorithms for Interactive Query Expansion, Efthimiadis, Proceedings of the 16.sup.th Annual International ACM SIGIR Conference, Pittsburgh, pp. 146-159 (1993).
Concept Based Query Expansion, Qiu and Frei, Proceedings of the 16.sup.th Annual International ACM SIGIR Conference, Pittsburgh, pp. 160-169 (1993).
Improving Retrieval Performance by Relevance Feedback, Salton and Buckley, J. of Am. Society for Info. Science 41(4):288-297 (1990).
Query Expansion Using Domain-Adapted, Weighted Thesaurus in an Extended Boolean Model, Kwon, Kim and Choi, Proceedings of the 3.sup.rd International Conference on Information and Knowledge Management (CIKM'94), pp. 140-146 (1994).
Browsing Through Querying: Designing for Electronic Books, Charoenkitkarn, Tam, Chignell and Golovchinsky, at the 5.sup.th ACM Conference on Hypertext, Seattle, WA 206-216 (1993).
A Survey of Information Retrieval and Filtering Methods, Faloutsos and Oard, Univ. of Maryland, 22 pages (undated).
A Corpus Analysis Approach for Automatic Query Expansion, Gauch and Wang, Proceedings of the 6.sup.th International Conference on Information and Knowledge Management, pp. 278-284 (1997).
Discovering Web Access Patterns and Trends by Applying OLAP and Data Mining Technology on Web Logs, Zaiane, Xin and Han, Proceedings of the IEEE Forum on Research and Technology Advances in Digital Libraries (IEEE ADL'98), pp. 19-29 (1998).
Bartell et al., "Automatic Combination of Multiple Ranked Retrieval Systems", Proceedings of SIGIR'94, Jul. 1994, pp. 173-181, Jul. 1994.
Belkin et al., "The Effect of Multiple Query Representations on Information System Performance" Proceedings of SIGIR'93, Jun. 1993, pp. 339-346, Jun. 1993.
Shaw et al., "Combination of Multiple Searches", Proceedings of TREC-3, Apr. 1995, pp. 105-108, Apr. 1995.
QuarterDeck Web Page, Downloaded Sep. 9, 1996, http://aracnid.qdeck.com/qdeck/products/webcompass, Sep. 1996.
Towell, et al. "Learning Collection Fusion Strategies for Information Retrieval",

Proceedings of the 12.sup.th Annual Machine Learning Conference, pp. 540-548, Jul. 1995.
Voohees, et al., "Learning Collection Fusion Strategies", Proceedings of SIGIR'95, pp. 172-179, Jul. 1995.
Voorhees, et al., "The Collection Fusion Problem" Proceedings of TREC-3, NIST Special Publication 500-225, pp. 95-104, Apr. 1995.

ART-UNIT: 271

PRIMARY-EXAMINER: Black; Thomas G.

ASSISTANT-EXAMINER: Coby; Frantz

ATTY-AGENT-FIRM: Knobbe, Martens, Olson & Bear, LLP

ABSTRACT:

A search engine is disclosed which suggests related terms to the user to allow the user to refine a search. The related terms are generated using query term correlation data which reflects the frequencies with which specific terms have previously appeared within the same query. The correlation data is generated and stored in a look-up table using an off-line process which parses a query log file. The table is regenerated periodically from the most recent query submissions (e.g., the last two weeks of query submissions), and thus strongly reflects the current preferences of users. Each related term is presented to the user via a respective hyperlink which can be selected by the user to submit a modified query. In one embodiment, the related terms are added to and selected from the table so as to guarantee that the modified queries will not produce a NULL query result.

12 Claims, 11 Drawing figures

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9/607841

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L1: Entry 1 of 1 File: USPT Oct 12, 1999

US-PAT-NO: 5966697
DOCUMENT-IDENTIFIER: US 5966697 A

TITLE: System and method for secure transaction order management processing

DATE-ISSUED: October 12, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Fergerson; Julie S.	Austin	TX		
Fowler; Christopher L.	Round Rock	TX		
Estes; Risser C.	Austin	TX		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
ClearCommerce Corporation	Austin	TX			02

APPL-NO: 08/ 960970 [PALM]
DATE FILED: October 30, 1997

INT-CL: [06] G06 F 15/20

US-CL-ISSUED: 705/26; 705/21, 705/27, 235/375
US-CL-CURRENT: 705/26; 235/375, 705/21, 705/27

FIELD-OF-SEARCH: 705/21, 705/26, 705/27, 235/375, 235/385, 186/61, 711/209

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected Search ALL Clear

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐	5319758	June 1994	Arai et al.	711/209
☐	5434394	July 1995	Roach et al.	235/375
☐	5752582	May 1998	Hayward	186/61

FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
10105829	September 1996	JP	

OTHER PUBLICATIONS

Studio Archetype develops innovative on-line shopping site for Time Warner, Business Wire, Sanfracisco, Oct. 29, 1996.

ART-UNIT: 275

PRIMARY-EXAMINER: MacDonald; Allen R.

ASSISTANT-EXAMINER: Irshadullah; M.

ATTY-AGENT-FIRM: Skjerven, Morrill, MacPherson, Franklin & Friel, LLP Van Leeuwen; Joseph T.

ABSTRACT:

A system and method for shopping at a variety of different vendors easily and securely is disclosed. A user computer, a checkout processor, and one or more merchant computers are interconnected via a network. A user first selects a merchant and receives product information from the merchant. The user may select products from the merchant along with options for the selected items. When the user is finished shopping at a particular merchant, the user may select another merchant or checkout. At any time during the shopping or during checkout, the user may modify items previously selected by the user. When the user requests to checkout, product selection data is transferred to a secure central checkout processor and the checkout processor obtains order information from the user, performs review order processing, and then processes the order.

60 Claims, 21 Drawing figures

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L14: Entry 1 of 4 File: USPT Jan 8, 2002

US-PAT-NO: 6338050
DOCUMENT-IDENTIFIER: US 6338050 B1

TITLE: System and method for providing and updating user supplied context for a negotiations system

DATE-ISSUED: January 8, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Conklin; Jeffrey	Boston	MA		
Foucher; David	Somerville	MA		
Foucher; Daniel	Bedford	MA		

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Trade Access, Inc.	Boston	MA			02

APPL-NO: 09/ 192729 [PALM]
DATE FILED: November 16, 1998

INT-CL: [07] G06 F 17/60

US-CL-ISSUED: 705/80; 705/26
US-CL-CURRENT: 705/80; 705/26

FIELD-OF-SEARCH: 705/80, 705/1, 705/26, 705/27, 705/39, 705/37

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐	4799156	January 1989	Shavit et al.	
☐	5195031	March 1993	Ordish	364/403
☐	5253165	October 1993	Leiseca et al.	
☐	5305200	April 1994	Hartheimer et al.	
☐	5495412	February 1996	Thiessen	364/401
☐	5557518	September 1996	Rosen	

☐	5629982	May 1997	Micali	
☐	5666420	September 1997	Micali	
☐	5671279	September 1997	Elgamal	
☐	5677955	October 1997	Doggett et al.	
☐	5692206	November 1997	Shirley et al.	395/793
☐	5715314	February 1998	Payne et al.	
☐	5732400	March 1998	Mandler et al.	
☐	5757917	May 1998	Rose et al.	
☐	5787262	July 1998	Shakib et al.	395/200.35
☐	5787402	July 1998	Potter et al.	705/37
☐	5790677	August 1998	Fox et al.	
☐	5794207	August 1998	Walker et al.	
☐	5802497	September 1998	Manasse	
☐	5809144	September 1998	Sirbu et al.	
☐	5826244	October 1998	Huberman	705/37
☐	5873071	February 1999	Ferstenberg et al.	705/37
☐	5897621	April 1999	Boesch et al.	705/26
☐	5905975	May 1999	Ausubel	705/37
☐	5918218	June 1999	Harris et al.	705/37
☐	5924082	July 1999	Silverman et al.	705/37
☐	5963923	October 1999	Garber	705/37
☐	6014643	January 2000	Minton	705/37
☐	6067531	May 2000	Hoyt et al.	705/35
☐	6141653	October 2000	Conklin et al.	705/80

FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
WO 97/04410	February 1997	WO	

OTHER PUBLICATIONS

"Trade'ex Introduces E-Commerce Software for Procurement, Distribution, Virtual E-Markets," Business Wire, p. 04281405, Apr. 1998.*
Gibson, Stan, "10 Who Dared to Be Different," PC Week, p. 21, Jan. 1997.*
"Pioneering Reseller Sites," Computer Reseller News, No. 711, p. 206, Nov. 1996.*
"Trade'ex Develops Java Compliant Electronic Commerce Solution for Creating Wholesale Markets Over the Internet," Internet Content Report, vol. 1, No. 12, Sep. 1996.*
"Trade'ex Unveils MarketMaker Software for Creating Online Marketplace," Business Wire, p. 04280202, Apr. 1998.*
"Corporate EFT Report," Technology Center, vol. 18, No. 2, p. N/A, Feb. 1998.*
"TradeAccess Sponsors First U.S. Trade Mission Web Site For Department of

Commerce," PR Newswire, Dec. 1997.*
Jones, Chris, "Trade'ex Readies Java-based MarketMaker," InfoWorld, vol. 18, No. 44, p. 6, Oct. 1996.*
TDS Marketing Group, "Trade'ex Connects the UK," M2 Presswire, p. N/A, Oct. 1996.*
Schmerken, Ivy, "NASDAQ Revamps to Keep Up," Wall Street Computer Review, vol. 8, No. 10, p. 35(6), Jul. 1991.

ART-UNIT: 2163

PRIMARY-EXAMINER: Hafiz; Tariq R.

ASSISTANT-EXAMINER: Meinecke-Diaz; Susanna

ATTY-AGENT-FIRM: Stretch; Maureen

ABSTRACT:

A multivariate negotiations engine for international transaction processing which: enables a sponsor to create and administer a community between participants such as buyers and sellers having similar interests; allows a buyer/participant to search and evaluate seller information, propose and negotiate orders and counteroffers that include all desired terms, request sample quantities, and track activity; allows a seller/participant to use remote authoring templates to create a complete Website for immediate integration and activation in the community, to evaluate proposed buyer orders and counteroffers, and to negotiate multiple variables such as prices, terms, conditions etc., iteratively with a buyer. The system provides secure databases, search engines, and other tools for use by the sponsor, which enable the sponsor to define the terms of community participation, establish standards, help promote the visibility of participating companies, monitor activity, collect fees, and promote successes. All this is done through a multivariate negotiations engine system operated at the system provider's Internet site, thus requiring no additional software at the sponsors', or participant sellers', or buyer's sites. This also allows buyers and sellers to use and negotiate payment options and methods that are accepted internationally. The system maintains internal databases that contain the history of all transactions in each community, so that sponsors, buyers and sellers may retrieve appropriate records to document each stage of interaction and negotiation. Documents are created by the system during the negotiation process.

54 Claims, 61 Drawing figures

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L14: Entry 1 of 14 File: USPT Jan 8, 2002

DOCUMENT-IDENTIFIER: US 6338050 B1
TITLE: System and method for providing and updating user supplied context for a negotiations system

Abstract Text (1):
A multivariate negotiations engine for international transaction processing which: enables a sponsor to create and administer a community between participants such as buyers and sellers having similar interests; allows a buyer/participant to search and evaluate seller information, propose and negotiate orders and counteroffers that include all desired terms, request sample quantities, and track activity; allows a seller/participant to use remote authoring templates to create a complete Website for immediate integration and activation in the community, to evaluate proposed buyer orders and counteroffers, and to negotiate multiple variables such as prices, terms, conditions etc., iteratively with a buyer. The system provides secure databases, search engines, and other tools for use by the sponsor, which enable the sponsor to define the terms of community participation, establish standards, help promote the visibility of participating companies, monitor activity, collect fees, and promote successes. All this is done through a multivariate negotiations engine system operated at the system provider's Internet site, thus requiring no additional software at the sponsors', or participant sellers', or buyer's sites. This also allows buyers and sellers to use and negotiate payment options and methods that are accepted internationally. The system maintains internal databases that contain the history of all transactions in each community, so that sponsors, buyers and sellers may retrieve appropriate records to document each stage of interaction and negotiation. Documents are created by the system during the negotiation process.

Application Filing Date (1):
19981116

Brief Summary Text (3):
This invention relates generally to systems for negotiating transactions and more particularly to systems for conducting negotiations and transactions internationally, over the Internet or other international network.

Brief Summary Text (5):
Business entities have tried for years to adapt computers and networks for use in sophisticated intercompany negotiations for commercial purchase and sales transactions, but with results that usually fall far short of expectations. Early mainframe computer attempts, for example, usually involved one corporation's allowing its existing suppliers and quantity buyers to connect to its internal private, proprietary network, using specially written locally developed application programs and private, proprietary network connections. These private systems were usually extremely costly to develop and maintain (often costing in the multi-millions of dollars) and very often did not meet all the needs and changing requirements of the participating businesses. Since many corporations had different internal networks and computer systems, considerable effort went into working around incompatibilities. Additionally, these systems had to be based on already existing, close relationships between buyers and sellers and usually were also based on previously negotiated agreements. Thus, the systems did not help in

searching for information about new buyers and sellers, nor with the evaluation or negotiation processes, nor with the documenting of those processes from the beginning. They were not interactive, but typically batch processing systems, and usually accepted alphanumeric text only, not the inclusion of graphics or sound files. They usually addressed ongoing relationships previously worked out manually, for which extremely expensive custom systems were developed at buyers' or vendors sites.

Brief Summary Text (7):
With the advent of the Internet and the World Wide Web (Web), the exchange of information amongst companies was greatly enhanced, with the use of Web technologies. However, even with chat rooms, bulletin boards, and forum websites most of this data and information exchange is simply that--not a multivariate negotiations process nor an online, electronic commerce process.

Brief Summary Text (8):
While some of the Web devices, such as chat rooms and bulletin boards are interactive, each essentially allows two or more people to have conversations over the Internet, in the same way they might speak over the telephone or several might speak over an old-fashioned party line telephone. While the chat room or bulletin board may store these conversations, no other action takes place as a result of the process. Consequently, privacy and security questions aside, these are not effective devices to use to negotiate a number of variable terms, reach agreement on each and document the results. Just as telephone conversations about negotiations can be recorded on tape, but do not produce a contract document on paper, online chat or bulletin board discussions about negotiations cannot easily be used to make a contract on the network, even if they are archived.

Brief Summary Text (9):
Extranet Web technology has been developed to enable a corporation to "talk to" (but not negotiate multiple variables in iterative bargaining with) its suppliers and buyers over the Internet as though the other companies were part of the corporation's internal "intranet." This information exchange is done by using client/server technology, Web browsers, and hypertext technology used in the Internet, on an internal basis, as the first step towards creating intranets and then, through them, extranets.

Brief Summary Text (10):
In typical intranet client/server technology, one computer acts as a Web server computer to perform complex tasks, while other, smaller computers or terminals are "clients" that communicate with the Web server. In typical client/server intranets the client requests data and performance of tasks from the Web server computer. A Web server program runs on the Web server computer to provide Web server functions. The communications between these intranet clients and Web servers is in Hypertext, or HyperText Markup Language (HTML)--the "language" of the Internet's World Wide Web.

Brief Summary Text (11):
Usually, for intranets, at the Web server site, one or more people would create documents in hypertext format and make them available at the Web server. In many companies, employees have personal computers or terminals at their desks connected to the internal network. In an "intranet" these employees would use a Web browser on their terminals to see what hypertext documents are available at the internal corporate Web server site.

Brief Summary Text (12):
While this has been an advance for internal communications over a private network, it does not usually provide any interactive, iterative, multivariate negotiations capabilities and it requires personnel familiar with HyperText Markup Language (HTML) to create hypertext links in documents to create and maintain the "internal"

Web pages. If a more interactive approach is desired, an Information Technology (IT) specialist in some form of scripting, such as CGI, or PERL is needed who can create forms documents and procedures to allow users to ask for information from the Web server. Again, this is custom programming at the user's site, and still does not provide multivariate negotiations or commerce capabilities.

Brief Summary Text (15):
To date, most attempts at adapting Internet technology to negotiations and commerce, even in small measure, have been focused on solving the problem from inside a corporation's systems going out and with the emphasis on the seller, not the buyer. Consequently, Intranet/Extranet options usually do not provide electronic commerce, only more sophisticated information distribution and sharing.

Brief Summary Text (16):
For corporations that sell at retail, one technique for selling goods over the Internet 04 is shown in FIG. 2b (Prior Art). This scheme uses the concept of a hosting "mall" 24 Website that enables buyers to browse through stores 28 (individual participating selling corporate Websites or aggregated catalog systems) and use a "shopping cart" 26 feature for selecting items to purchase. Participating sellers in a mall 24 create their own Websites which list items for sale and prices. The mall usually provides the shopping cart technique for the buyer to use to select items to buy. Such Internet 04 sales techniques also use security systems for transmitting payments by credit card 30a and 30b or CYBERCASH.TM. payment methods (not shown). Most of these mall Website are significantly limited in the interaction, if any, they allow between buyers and sellers. A few allow limited price negotiations between buyers and sellers, but none allow iterative, multivariate negotiation and bargaining for both price and terms, such as availability, shipping, carrier, payment methods, risk of loss, etc.

Brief Summary Text (17):
Similarly, for non-retail business buyers and sellers, the mall concept above has limited value, since it usually does not connote much about the integrity or capability of the participating businesses, nor provide all of the various payment options a business might want to use. Most of the present Internet and World Wide Web systems for commerce are directed to consumer purchases of retail items in small quantities, not to business to business transactions or consumer transactions negotiating for goods and services in large quantities on national or international terms.

Brief Summary Text (18):
The companies that do provide more of a business to business focus over the Internet usually do so by offering special enterprise application server software 19s, as shown in FIG. 2a (Prior Art) for installation inside an enterprise's private corporate network. These programs fit into a category of software called front-office applications or application servers--so called because they sit close to the user end inside an enterprise and are customized to interface with the back-office applications 21 inside the enterprise, which include commercial products from software suppliers as well as custom developed applications that handle internal business functions such as inventory tracking, financials, human resources and supplies, and similar Enterprise Resource Planning (ERP) systems.

Brief Summary Text (19):
As seen in FIG. 2a (Prior Art), three separate corporations 16a, 16b and 16c are shown using the services of an enterprise commerce site provider 18. Each corporate site 16 has a firewall 16af, 16bf, and 16cf. Firewalls are a combination of hardware and software designed to prevent unwanted intrusion into a private corporate network by unauthorized personnel. A firewall usually puts a specially programmed computer system between its internal network and the Internet. It also prevents the company's internal computer users from gaining direct access to the Internet, since the access to the Internet provided by the firewall computer is

usually indirect and performed by software programs known as proxy servers.

Brief Summary Text (20):
Note that, as shown in FIG. 2a (Prior Art), in a typical implementation of an enterprise commerce site provider 18, the enterprise commerce site provider 18 breaks through the firewalls 16af-16cf of each of its customers. Normally this is done in such a way as to provide secure access. Occasionally, if the commerce site provider 18 allows its customers to be linked for certain transactions over the Internet 04, over a common external link 10 to the Internet, internal security may be comprised, if the customer's firewall is configured incorrectly and the Internet transmission results in a breach.

Brief Summary Text (23):
Because application server products 19h and 19s, and possibly additional database server hardware and software as seen in FIG. 2a (Prior Art), have to be installed inside each participating corporation, customized to that corporation's internal back office systems 21, and backed by appropriate internal training support, it can cost in the several hundred thousands or millions of US dollars to purchase and install the systems and train internal people on their use. While a few of these applications connect buyers and sellers over the Internet, usually both the sellers and the buyers must also install and customize the application server software 19s inside their internal networks 14--another reason why these systems are so expensive, difficult to implement and costly to maintain. The traditional approach has been to design systems that will interface with the corporation's own internal computers and systems. Since these vary from one company to another, this is another reason why the application server software 19s can be costly, as extensive modifications to it may be necessary to interface with each customer corporation's own systems.

Brief Summary Text (33):
In addition, obtaining real time card authorization for international transactions online is a major undertaking, because online card processing and bank to bank connectivity does not exist on the Internet in many countries. Also, transactions denominated in most non-G7 currencies are not likely to be processed in real time online because the international banking system is not capable of doing real time, online, Internet currency transactions. Consumers who travel and use credit cards to make payments in other countries, and other currencies, may think these transactions are being handled online, but they are not. Most of the currency exchange processing is done by the connecting banks offline, and most of it that is done electronically is done on private bank and interbank networks.

Brief Summary Text (47):
Obtaining samples from vendors known to the production buyer is significant in itself, as seen above. However, in today's international trade, the overwhelming majority of potential buyers and sellers are not aware of each other's existence. Yet international trade is increasing by double digit numbers each year, so an obvious need exists for more capability. Many countries are taking advantage of the "leapfrog" effect by using the Internet and the latest in information technology (IT) to build instant infrastructures for competing in international commerce. Some countries and trade regions have set up inspection services for potential outside buyers, so that a buyer can obtain an independent assessment of a particular vendor's production facilities from such services. This saves some time and travel expense. However, it still does not provide a buying team with samples for evaluation. With current Internet commerce systems there is no effective way to order such samples. By the time terms and conditions for a sample order have been negotiated manually at such distances, the samples are not likely to be relevant any longer to the buyer company's development goals.

Brief Summary Text (52):
Returning now for a moment to FIG. 2b (Prior Art), as mentioned above, Websites

such as retail malls 24 or standalone Websites are used by some corporations which sell at retail. While many tools exist to allow companies to design Websites, there are not as many that allow a company to design one for automatic integration into a Website in a mall or with online catalogs. Since most companies want to maintain control over the appearance of their corporate and brand names, those mall or catalog sites that do provide Web tools for their business subscribers, usually do not provide complete common interfaces or templates for the companies to use, nor do they integrate the sites with multiple features and services. Instead, they usually only provide access to a shopping cart 26 feature and a secure credit card 30 payment feature with a catalog product and price list that is searchable. Some may also provide manual help to the seller in listing its Website in relevant search engines used on the Internet. Normally, however, it is the seller's responsibility to do so. In either case, the registration with search engines is usually done manually. Some may also require the seller to arrange for payment processing separately, offline. As mentioned before, obtaining a merchant ID can take weeks, thus limiting what the seller can do online until then.

Brief Summary Text (53):
Presently, on the Internet, search engines such as Compaq Corporation's ALTAVISTA.TM., Yahoo corporation's YAHOO.TM. and so on, have different schedules for accepting and adding new sites to their search lists. It can take anywhere from 4-8 weeks or more for a site to be registered with each search engine. Many Internet search engines also add entries to their lists by "spidering" around the Internet to gather all Website addresses. Depending on the search engine, spidering may take much longer or not be as complete as a user requested registration. For example, ALTAVISTA's Website states:

Brief Summary Text (54):
The Altavista search engine starts by spidering your entire site with its spider Scooter. Scooter may take up to three months to spider and index your entire site. It normally spiders about 2 pages per site in any week . . . Best bet is to submit your pages manually at the rate of no more than 30 per week.

Brief Summary Text (58):
Creating a single Website can take anywhere from 1-8 weeks to 6-8 months or more. Creating one that is able to handle simple electronic commerce transactions may take even longer as merchant accounts for credit cards need to be obtained, integrating CYBERCASH.TM. or similar realtime payment methods must be provided for, search engine registrations need to be requested and so on.

Brief Summary Text (61):
Similarly, the companies that provide Web hosting for a mall 24 on the Internet as shown in FIG. 2b (Prior Art) usually address only retail sales of consumer articles, with little or no control over the individual businesses that subscribe as sellers or the consumers who browse as buyers. In many business transactions, buyers want to know that the sellers meet some minimum standards and requirements and sellers want to know that fraudulent or inappropriate requests will not be tolerated.

Brief Summary Text (63):
The few enterprise electronic commerce providers that go beyond the mall concept do so with the addition of a governor or administrator feature which coordinates with the enterprise application servers. The governor sets up and administers the rules for the site and can act as a broker. This usually entails a customized, specially programmed matching of participating companies' computer systems to coordinate authorization and payment approval so orders flow between firms. However, this technology can cost millions and it can take as much as two years to program the computers and set up the necessary processes and equipment at all the participating company sites. Most of the components for doing this are sold by major computer hardware and software vendors who also sell application server software, hardware,

and consulting services to install the "front-end" application server at the participating business's site. Thus, while the Internet may be used to connect the companies participating, most of the work is done by the application server software installed on private, proprietary networks at the various company sites, and the Internet serves as a simple external telecommunications link.

Brief Summary Text (67):
The production purchasing buyer needs to be able to collect information about sellers, and it would help to know that some entity has screened them and monitors them for adherence to some known set of standards and reputability. Additionally, production buyers today usually have to travel to a seller's physical location to get sample products. If the buyer is in the US and the seller is in Malaysia, this might costs thousands of dollars in airfares and travel expenses, just to get samples. Most existing products and services do not help with these tasks. As noted above, samples of newly engineered component parts may be critical for the buyer company's completion of its product. New systems being built by a computer maker may need power supplies or heat dissipation systems that are also new and unproven. The engineers developing the new computer systems need to be able to test their prototypes with sample, new component parts to know the whole system will work. None of the existing methods of buying over the Internet address this kind of need. Most systems are not designed from the buyer's viewpoint.

Brief Summary Text (68):
One system does attempt to address a few things from a buyer's viewpoint. This is the Priceline.com system which is described in U.S. Pat. No. 5,794,207 Method and Apparatus for a Cryptographically Assisted commercial Network System Designed to Facilitate Buyer-driven Conditional Purchase Offers, issued Aug. 11, 1998, to Walker et al., assigned to Walker Asset Management Limited. This is essentially an online bidding process in which a buyer specifies the price it desires to pay for an object, such as an airplane reservation or a car. The bid is submitted over the Internet to a central site which analyzes a database of sellers of that type of item to find one or more selling the object at close to the bid price. These matches or near-matches are presented to the buyer, who can then select from them and place a conditional purchase offer. If the seller accepts, the sale is made. A buyer can initiate another round of bidding if there is no good result from the initial one. While this system has benefits for certain types of purchases, usually of completed, commodity items, it does not address the needs of production buyers outlined above. It does not provide iterative bargaining between the buyer and seller on all aspects of a multivariate transaction, nor does it connote much, if anything about the participating sellers. It is similar to other auction sites on the World Wide Web which allow you to submit bids to a seller or auctioneer, but do not provide the opportunity to bargain interactively with the seller on all the terms. A bid submission process is quite different from a price and terms negotiation process. Bid submission systems are usually designed to assist a seller in disposing of excess inventory. Hence, some malls and enterprise server applications provide limited electronic commerce, but none provide true multivariate negotiation ability.

Brief Summary Text (69):
Finally, both the mall concept and the enterprise server concepts use databases for storing and indexing product and price lists and catalogs, along with final orders.

Brief Summary Text (76):
These and other objects are achieved by a multivariate negotiations engine for international transaction processing which: enables a sponsor to create and administer a community between participants such as buyers and sellers having similar interests; allows a buyer/participant to search and evaluate seller information, propose and negotiate orders and counteroffers that include all desired terms, request sample quantities, and track activity; allows a

seller/participant to use remote authoring templates to create a complete Website for immediate integration and activation in the community, to evaluate proposed buyer orders and counteroffers, and to negotiate multiple variables such as prices, terms, conditions etc., iteratively with a buyer. The system provides secure databases, search engines, and other tools for use by the sponsor, which enable the sponsor to define the terms of community participation, establish standards, help promote the visibility of participating companies, monitor activity, collect fees, and promote successes. All this is done through a multivariate negotiations engine system operated at the system provider's Internet site, thus requiring no additional software at the sponsors', or participant sellers', or buyer's sites. This also allows buyers and sellers to use and negotiate payment options and methods that are accepted internationally. The system maintains internal databases that contain the history of all transactions in each community, so that sponsors, buyers and sellers may retrieve appropriate records to document each stage of interaction and negotiation. Documents are created by the system during the negotiation process.

Brief Summary Text (79):
Still another aspect of the present invention is that, in a preferred embodiment, all demographic, payment and negotiation information is transmitted using secure sockets over an open architecture network such as the Internet's Terminal Control Protocol-Internet Protocol (TCP-IP) network, thus eliminating the need for more expensive private leased lines or proprietary networks for the iterative bargaining between buyers and sellers amongst themselves or for communications with the sponsor.

Brief Summary Text (80):
Yet another aspect of the present invention is that the data collected about all transactions is kept in databases in a secure location inside an internet protocol (IP) firewall at the commerce provider's site, thus eliminating the need for additional, expensive database server hardware and database server software and firewall hardware and software at buyer and seller and sponsor sites.

Brief Summary Text (84):
Another aspect of the present invention is that remote authoring templates are integrated with the search and negotiations engines so that a seller in a community can create a Website incorporating its corporate logos and descriptions, while the system automatically integrates products, and other items with the community's promotional and other activities so that the seller can go online immediately.

Brief Summary Paragraph Table (3):
Company/ Website Size Average Cost Small $25,000 (online ordering by fax but no transaction or payment processing) Medium $33,000 (online ordering with credit card processing) Large $78,000 (database searches, online ordering, credit card processing)

Drawing Description Text (18):
FIG. 2b (Prior Art) is a block diagram of a prior art Internet mall site.

Drawing Description Text (42):
FIG. 25 is a flow diagram of the present invention's automation of search engine submissions.

Detailed Description Text (3):
In FIG. 1a, a block diagram of the present invention shows a multivariate negotiations engine system 02 communicating over telecommunications link 10a to the Internet 04. A community sponsor 06 is shown also communicating over a telecommunications link 10b to the Internet 04. Participants 08 in this community are shown at 08a-08h. For commercial implementations each participant is either a buyer or a seller (or in some cases, both) in the community. Participants 08

connect to community sponsor 06, through the Internet 04 and multivariate negotiations engine system 02. Multivariate negotiations engine system 02 contains all the software needed to create sponsored communities, communicate with sponsors, and with all participants and store the results. Each sponsor or participant only needs a standard Internet browser such as those commonly available from Netscape Corporation or Microsoft Corporation, among others, and a commonly available desktop computer or other terminal, workstation, or computer to activate the browser over any commonly available link to the Internet. Typically, these browsers are distributed free of charge by their suppliers.

Detailed Description Text (4):
Multivariate negotiations engine system 02 can be used for other types of sponsored communities where interactive, iterative negotiations of a number of interrelated, variable items amongst the participants over the Internet is desired.

Detailed Description Text (6):
Additionally, while one form of sponsored community addresses corporate buyers and sellers engaged in production purchasing, other commerce communities could be implemented. For example, stock or commodity trading over the Internet might be conducted using the present invention. A sponsor, such as a traditional stock exchange or a newer type of securities body could establish the standards for accepting stockbrokers into the community. Such standards might include compliance with applicable securities regulations and so on. The sponsor can monitor and regulate actual iterative multivariate negotiations such as options, puts, calls, at the market or not at the market, etc., for buying and selling of commodities or securities electronically over the Internet. Or a trade show organizer might sponsor a community for allocating and iteratively negotiating accommodations, placement, footage, signage, facilities, etc., amongst vendors and suppliers at the show site.

Detailed Description Text (9):
Commonly available video conferencing and other multi-media techniques can be added to multivariate negotiations engine system 02. For these embodiments, it is possible that both sponsors and participants would have to add hardware or software for the multi-media features at their sites, if such features are not already present. FIG. 1h illustrates the use of commonly available videoconferencing equipment such as a camera positioned at the top of a monitor connected to a simple desktop computer. With existing videoconferencing products, an image I1 of a participant at another site is displayed on the monitor at the same time the Web browser interface W1 to multivariate negotiations engine system 02 displays a list of the terms being negotiated. Those skilled in the art appreciate that most existing videoconferencing products also include voice communications as well. Thus, the negotiating participants can see and hear each other and the complex, multiple variables they are negotiating at the same time. Multivariate negotiations engine system 02 can archive the multimedia sessions as video and audio files to be stored with the text.

Detailed Description Text (10):
The present invention allows the creation of one or more sponsored communities of any number of types for conducting iterative negotiations over a network. As seen in FIG. 1a, the network used is the present-day Internet with TCP-IP protocols and formats, but those skilled in the art will appreciate that it could also be implemented on any future open network(s) which might replace or supplement the Internet, or it could be implemented inside current, private networks within a corporation, if desired.

Detailed Description Text (11):
Turning now to FIG. 1c, a logical diagram of several different sponsored communities is shown. Sponsored community CA might be a community of farm equipment buyers and sellers, while sponsored community CC might be a community of

stockbrokers CC08br and traders CC08tr. Sponsored community CB might include computer manufacturers CB08m and peripheral makers CB08p in a standards community CB. Existing enterprise electronic commerce systems would require each member of such a community to install special Webserver, application server and database server software at each sponsor site, and at all or some participant sites in a community such as sponsored community CC. The present invention, however only requires that each sponsor, and participant in a community have a standard Web browser (not shown here), and a connection to the Internet 04. All of the processing software and hardware needed to handle transactions for each community CA-CC shown here is provided at the multivariate negotiations engine system 02's site.

Detailed Description Text (12):
The above aspect of the present invention is particularly important in business to business negotiations. Use of the Internet architecture helps both sponsors and participants keep their separate brand identifications through their individual URLs and Websites, and the use of http addressing and protocols enables near-instantaneous pulling of text and object files in response to any queries, whether in the same country or around the world.

Detailed Description Text (14):
Now turning to FIG. 1g, the present invention can be viewed as a series of interrelated processes as shown here. For a commercial community, there are seller processes, sponsor processes and buyer processes. Remote authoring 50, is a seller process which enables a registered seller in the community to create a seller Website within the community on which to include the seller's marketing and product information, along with pricing, terms, service offerings and so on. Information generated or created in this remote authoring process 50 is automatically integrated with the community databases and listings. Promotion and brand identifying actions (such as registering the Web page with search engines) are taken automatically on behalf of the seller as well.

Detailed Description Text (15):
Still in FIG. 1g, a seller, once registered and having completed remote Web authoring, can immediately evaluate orders 54 and other inquiries and respond to them. The present invention alerts sellers (and buyers) that a pending offer or counteroffer has been submitted, so that they may return to the system to negotiate or resume negotiations. Finally, another seller process is order activity 58 which allows the seller to follow the activity by e-mail or browser or similar means, and request data downloads or activity reports on transaction data.

Detailed Description Text (16):
The sponsor processes of FIG. 1g include maintaining databases, registering community and seller domain names, and submitting Web uniform resource locators (URLs) to multiple search engines so that both the community Website and each seller Website within it can be found by search engines such as Compaq's ALTAVISTA.TM. among others. Sponsor 06 also monitors activity, collects fees, establishes standards or rules (or both) for the community, and promotes successes. Once a deal is concluded it is archived 68, by multivariate negotiations engine 212 on behalf of seller. The present invention also allows the collection and analysis of direct e-mail demographic information, such as company name, title and location. This data helps the present invention screen out frivolous or fraudulent inquirers. For example, a high school student attempting to propose an order might be intercepted when the present invention determines that no company name or title has been provided and no other authorization for such a request has been provided for.

Detailed Description Text (17):
Buyer processes shown in FIG. 1g include search and evaluate processes 70, which enable a prospective buyer to find companies and their products in the community and investigate their prices, terms and service offerings. If a buyer is interested

in opening negotiations with a particular seller, the propose orders processes can be based on catalog prices or desired price and other terms, special orders for samples or small quantities, proposed payment vehicles, and can include information about the buyer. A buyer in this community can use order activity processes 78 to determine an order's status in the system, etc. Note that access to relevant information by each type of community member (sponsor, buyer, seller) is protected by password security and access levels.

Detailed Description Text (18):
Turning now to FIG. 1k participant functions 214 are outlined. In a commerce community, the participants might be grouped as sellers 08grpa and buyers 08grpb. Seller participant 08grpa functions include automatically integrated remote Web authoring 214-02 and processing and administration 214-04. In remote Web authoring 214-02, the present invention allows a seller registering with the sponsored community, to automatically create a seller's Website within the community, on completion of registration. The seller selects from several Website format templates provided by the present invention and as the seller "fills in the blanks" in a selected template, the information is automatically integrated with the rest of the system, so that orders can be processed and accepted immediately and more efficient registration with search engines is automatically initiated. A seller's processing and administrative steps 214-04 includes such tasks as uploading product catalogs, customizing the Website from time to time, and similar processing.

Detailed Description Text (20):
Next, in FIG. 1L, network functions 207 of the present invention are shown. As mentioned above, most of the functions of multivariate negotiations engine 212 are actually implemented as part of Webserver software 210s. As data is sent to and from the Internet 04 by Webserver 210W, Webserver software 210s interprets the TCP-IP protocol and transfers the contents to multivariate negotiations engine 212's Webserver and dynamic HTML functions 207-02. In one embodiment, these functions cause dynamic HTML text to be created to implement and communicate with the other functions of the present invention. Those skilled in the art will appreciate that Java, Java scripting, XML, or any of a number of other languages could also be used for such communications.

Detailed Description Text (23):
Now turning to FIG. 1n, database functions 222 are shown. First, database functions 222 are able to communicate with all other functions and services of the present invention and vice-versa. For example, as a remote Web authoring 214-02 request is handled by participant functions 214, Webserver software 210s fields the request and communicates it through IP firewall 203f to database functions 222, asking the database server software managing database functions 222 to process the request and return the appropriate information. The database server software performs searches, analysis, and any computations needed to hand back the correct data. Webserver software 210s formats the returned data, and through conventional common gateway interface scripting techniques, creates dynamic HTML (or XML or Java or Java-compatible, etc.) text for ultimate display. This formatted data, in turn, is transmitted to the appropriate sponsor or participants' browsers over the Internet.

Detailed Description Text (27):
Turning to FIG. 1b, multivariate negotiations engine system 02's site contains all the software, hardware and database functions to create and support complete operations of communities. As seen there, the multivariate negotiations engine system 02's Website has a Webserver 210w containing standard Webserver software. In one embodiment the public domain Apache Webserver software is used, but those skilled in the art will appreciate that any of a number of other Webserver software products could be used, such as that provided by Microsoft Corporation's Internet Information Server (IIS) product or Netscape Corporation's Fasttrack or Enterprise Server products or any of several of UNIX.TM. Operating system server software

products available from many vendors.

Detailed Description Text (28):
Still in FIG. 1b, Webserver 210w enables communications in the TCP-IP format, to be received from the Internet 04 and forwarded into multivariate negotiations engine system 02's site, which is here shown including server farm 230. Data in these communications is transferred through IP firewall 203f. Those skilled in the art will appreciate that IP firewalls, that is, firewalls such as those supplied by RAPTOR.TM. IP firewalls from Axent Technology Corporation, SOLSTICE 1.TM. and SOLSTICE 2.TM. IP firewalls from Sun Microsystems, Inc., and PIX.TM. Firewalls 510 and 520 from Cisco Systems, Inc. among others, are capable of screening the incoming and outgoing information at all the levels of the TCP-IP OSI 7-layer model. Thus they provide greater security than simpler router or proxy server firewall approaches. Webserver 210w, also transmits out to Internet 04, when transmissions are sent out from multivariate negotiations engine system 02's site. Thus, the data about negotiations and transactions in a community is kept safe behind IP firewall 203f at multivariate negotiations engine system 02's site. Data is kept secure by IP firewall 203f and communications over the Internet 04 are kept secure by Secure Socket Layer (SSL) encryptions.

Detailed Description Text (32):
Similarly, a seller may wish to use a Website it has previously created at great expense. Multivariate negotiations engine system 02 enables this by providing a customizable scripting language as shown in FIG. 26, and described in more detail below. Using this language, multivariate negotiations engine system 02 helps a seller create a Website which is, in effect, a mirror of the seller's original Website. A seller might choose to place its product catalog there and have the rest of its Website remain external to multivariate negotiations engine system 02's site. Thus, the existing seller external Website retains its existing domain name and URL, is linked to by the present invention as described above, and requests to see the product catalog are linked back to multivariate negotiations engine system 02's site where the product catalog is kept.

Detailed Description Text (35):
FIG. 1i is a flow diagram of the steps of iterative multivariate negotiations engine 212 of the present invention. At step 212-02 an initializing event occurs, such as participant 08 proposing terms to another participant on an initiating terminal (or desktop computer or workstation, etc.) over the Internet 04 through multivariate negotiations engine system 02, thereby creating a communications path which is ultimately directed by multivariate negotiations engine system 02 over the Internet 04 to the destination terminal at which the selected other participant 08 is active. The terms could be the placement of an order from a buyer, or a seller's response to a general request for proposal (RFP), and so on. In initializing step 212-02 multivariate negotiations engine 212 recognizes that these two participants are negotiators and also determines that a deciding entity has been appointed either by the sponsor or by the rules established for this community.

Detailed Description Text (49):
Once the buyer has sent its proposal, the seller is alerted by the system by email (as seen in FIG. 20) that a proposal is available on the system for review and negotiation. In one embodiment, the email notification includes links to multivariate negotiations engine system 02's site. Once the seller (using its browser) becomes aware from the e-mail that a proposal is available it jumps immediately, using the link mentioned above in the email, to view a browser screen such as that shown in FIG. 16, which shows a proposed order with payment by letter of credit from the above buyer. According to the present invention, the seller must still use its user id and password for such viewing, thus preserving security of the data. In this approach, the email notification does not contain any sensitive or confidential data. It serves simply as a notifier. Note that email notices of the present invention do not contain any confidential information. Confidential

data is transmitted securely to the browser through SSL techniques. Access to the data is by user name and password.

Detailed Description Text (52):
One of the paradoxes of international trade now is that as today's global economy expands exponentially the number of potential buyers and sellers, it becomes correspondingly difficult for them to find each other and negotiate agreements. The present invention addresses this in a number of ways. First, a sponsored community increases the visibility of member companies which are sellers. The methods described below in connection with functions to promote visibility for the sponsored community and its members significantly increase the likelihood that a buyer, searching for a new supplier over the Internet will find members of such sponsored communities and that they will be more likely to meet the buyer's needs. For example, trade development communities can be established using the present invention, including as sellers only those that meet the qualifications outlined by the sponsor. This simplifies a prospective buyer's search and evaluation task significantly. The sample order quantity purchasing features (also described in more detail below) of the present invention, significantly reduce the time it takes for a buyer to qualify a new supplier or seller anywhere in the world.

Detailed Description Text (54):
With reference now to FIG. 27, an overview block diagram illustrating the international transaction processing features of the present invention is shown. As seen there, multivariate negotiations engine system 02 is connected over an international network IN, such as the Internet 04. Those skilled in the art appreciate it could also be a proprietary network or virtual private network, if desired. For international processing, sponsored community CC might be a community of sellers of electronic components 08s located in Pacific rim countries. Prospective buyers 08b can be located anywhere in the world. such as Russia, Europe, Africa, South America, North America, and so on.

Detailed Description Text (60):
FIG. 10-1 shows the Web authoring features of the present invention as they are displayed to a participant seller through the sponsor's Web setup area. As can be seen there, Web page buttons, such as general information button 100, home page button 104, and so on, can be selected by the user at its browser to edit or preview a particular part of the website. Thus, the setup area takes advantage of existing web browser technology to simplify the authoring process.

Detailed Description Text (62):
Next, at step 405 in FIG. 4a the seller provides basic information as prompted by the system through a setup screen such as that shown in FIGS. 10-1-10-3. Portions of the demographic information collected there, along with other data collected later is automatically formatted along with the META tags and Meta Keywords for automatic submission to search engines. At step 410 in FIG. 4a, the system presents the community's standard license agreement and terms to the seller. If the seller agrees to the terms at decision block 425, processing continues. If the seller does not agree, the seller may proceed to block 420 to negotiate with sponsor or elect not to participate.

Detailed Description Text (64):
Turning now to FIG. 4b, processing steps for the customization of the seller's Website in the community are shown. At step 455, the seller logs into this part of multivariate negotiations engine system 02 using the username and passwords it selected when entering demographic data in the previous registration steps. At step 460, the seller, having already selected a general template for a Website, selects a customization item from those that are specific to its template. At step 465, the seller is presented with instructions and suggestions as it customizes features using an online form such as that shown in FIGS. 10-1-10-3. Sellers with a small inventory of goods can simply create a product catalog online using the web

authoring features of the present invention.

Detailed Description Text (65):
Sellers with existing digital versions of their product catalogs or inventory tracking systems are able to integrate them with the present invention using application programming interfaces (APIs), file transfer protocols (FTP), or extensible markup language (XML), which latter method is in the final stages of becoming a standard language for the Web.

Detailed Description Text (70):
As seen in FIG. 6, the sponsor functions 213-04 are also involved in the remote Web authoring functions 214-02. At step 490, after sponsor determines the seller is in good standing, sponsor register's seller's company name, products and other data with the community's internal search engine. Next, at step 505, sponsor registers the seller's name with Internic, the corporation established for assigning domain names and URLs. At step 510, sponsor automatically submits seller's name and data to major external search engines on the Internet. At step 515, the sponsor completes the integration of the new seller into the community, enables it for active status, includes it at the top of the list of any vendor databases and allows the seller's Website access to the online community's functions.

Detailed Description Text (71):
Returning to FIG. 1j, another principal sponsor function is promoting visibility 213-04. In this capacity, a sponsor 06 may submit its own Website and URL's to a number of Internet search engines and submit each selling participants' Websites and URL's to such search engines as soon as the seller is registered and has created a Website. A typical sponsor's promote visibility functions 213-04 formats the URL's and domain names (as provided by the system registration forms which are automatically integrated into the system) into the META Tags and Meta Keywords or similar formats and submission schedules most likely to speed up registration with the search engines. For example, the ALTAVISTA.TM. search engine Web site states that:

Detailed Description Text (73):
Since, as noted above, it may take the ALTAVISTA.TM. search engine and others, as many as three months or more to index a site on a purely random basis, submissions such as this can significantly improve the visibility of the new seller Websites from the outset. Automating submissions to them further speeds up this process. In addition, aggregating all of the submissions under the sponsor community hierarchy is likely to generate exponentially more traffic as it takes advantage of the Internet's architecture and search engine indexing capabilities. Traffic, such as inquiries by potential buyers against any of the keywords submitted for the community site will come into the community environment.

Detailed Description Text (75):
Next, at step k2, promote visibility function 213-04 checks to see if it is time to submit the data to a selected search engine n. As noted above, some search engines accept submissions only on a weekly basis, at specified times. If search engine n is not accepting data at this time promote visibility function 213-04 proceeds to step k3 to wait the specified interval. If it is the right time to submit visibility data to search engine n, promote visibility function 213-04 does so at step k4. At step k5 a check is made to see if any more submissions should be made to search engines. If there are several more to process, promote visibility function 213-04 finds the address of the next search engine, which now becomes search engine n, and returns to decision block k2. If it has been determined at step k5 that submissions have been made to all search engines, promote visibility function 213-04 returns at step k6. Those skilled in the art will appreciate that these submission steps can be scheduled to repeat on a regular basis until all of the visibility data for a new participant registrant has been submitted to all the search engines. The present invention also schedules updating submissions on a

regular basis to insure most search engines place community sites near the top of their index lists.

Detailed Description Text (86):
Referring briefly to FIG. 2c (Prior Art), it can be seen that the prior methods of ordering sample quantities were heavily labor intensive. A person P1, from the prospective buyer organization would look through a hard copy product catalog, place an order by facsimile or telephone, and possibly fly to the seller's factory, where face to face negotiations might occur with seller's representative P3. Buyer P1 might also have to negotiate by fax and telephone a letter of credit with its bank representative P2, before all price, payment, and other terms are completed so that payment can be arranged to occur upon shipment of the sample quantities. As noted in the background section above, this traditional approach is usually lengthy, costly and labor-intensive.

Detailed Description Text (87):
Referring now to FIG. 29, the present invention enables a prospective buyer to electronically search a sponsored community site at step SO1 for sellers of goods meeting buyers needs. As mentioned under international transaction processing, above, this ability to find new, possibly pre-qualified suppliers over the internet is a significant advantage for production buyers.

Detailed Description Text (93):
A typical sponsor 06's administrative database DBa, in FIG. 1f, includes such things as templates, procedures, and charges for registering new sellers, procedures for recognizing and assigning passwords to buyers, procedures for automatic renewal, details of each sellers required banking information, and so on. Sponsor 06's vendor database DBb, might be a listing of all the potential vendors in this general market. For example, if the general market for which sponsored community CC was created is the market for power supplies for electronic equipment, then all the makers of power supplies might be included in a brief listing in this database. As a manufacturer of power supplies for this market registers with the sponsor 06, agreeing to meet all the conditions specified for inclusion by sponsor 06, it is automatically placed, by multivariate negotiations engine system 02, at the top of a list of vendors in vendor database DBb. Thus, when potential buyers are browsing through the community Website CC, they will find the registered sellers at the top of vendor database list DBb, with others listed in lower priority order.

Detailed Description Text (96):
With reference now to FIG. 5a, it can be seen that database functions 222 communicate directly with webserver 210s through IP firewall 203f in the present invention. The traditional approach to addressing database concerns over the Internet usually involve a webserver, an application server software product, and a database software server product. As can be seen in FIG. 5a, this embodiment of the present invention does not use an application server software product. Instead the functionality that is needed to receive and transmit information to and from a participant 08, over a communications path through webserver 210s of multivariate negotiations engine system 02 is accomplished by using common gateway interface (CGI) programming such as per, C++ and Java. Those skilled in the art will appreciate that other scripting and programming languages could be used as well.

Detailed Description Text (97):
As seen in FIG. 5a, CGI programming is used between participant 08's browser software at the participant's site, to handle communications between participant 08 and multivariate negotiations engine system 02's webserver 210s. CGI programming is used to dynamically create Web pages based upon the participant's request.

Detailed Description Text (99):
For example, and still in FIG. 5a, if a buyer participant 08 wishes to place a

proposed order, the browser encrypts it at the browser's secure socket layer and webserver 210s decrypts the proposed order upon receipt at multivariate negotiations engine 02's site. Webserver 210s next analyzes the proposed order to understand it and formats into a request sent to database functions 222. In addition to basic read and write functions, database functions 222 shown in FIG. 5a, include operations such as search, analyze, compare, report, sort and relate (between databases.) Formatting can be as simple as "use=username" etc. A request such as "find user=username, return catalog" might be sent through IP firewall 203f. Using object-oriented techniques, the database is ordered more compactly to provide faster search capabilities. Those skilled in the art will appreciate that traditional flat file and relational or other database structures could be used as well.

Current US Cross Reference Classification (1):
705/26

Other Reference Publication (4):
"Trade'ex Develops Java Compliant Electronic Commerce Solution for Creating Wholesale Markets Over the Internet," Internet Content Report, vol. 1, No. 12, Sep. 1996.*

CLAIMS:

23. The apparatus of claim 22, wherein the integration of new members desiring to participate in multivariate negotiations further comprises automatically registering such new members with a sponsored community search engine.

24. The apparatus of claim 22, wherein the integration of new members desiring to participate in multivariate negotiations further comprises automatically submitting a new member's name to appropriate external network search engines.

29. The apparatus of claim 28, wherein automatically promoting the visibility of the new member further comprises:

means for formatting sponsored community names, member names, and uniform resource locators into appropriate formats;

means for selecting search engines;

means for selecting submission schedules more likely to speed up registration with the selected search engines; and

means for aggregating submissions of sponsored community names, member names, and uniform resource locators to optimize registration and visibility and automatically submitting the aggregated submissions to the selected search engines on the selected schedules.

32. The method of claim 31, wherein the step of integrating new members desiring to participate in multivariate negotiations further comprises the step of automatically registering such new members with a sponsored community search engine.

33. The method of claim 31, wherein the step of integrating new members desiring to participate in multivariate negotiations further comprises the step of automatically submitting a new member's name to appropriate external network search engines.

38. The method of claim 37, wherein the step of automatically promoting the visibility of the new member further comprises the steps of:

formatting sponsored community names, member names, and uniform resource locators into appropriate formats;

selecting search engines;

selecting submission schedules more likely to speed up registration with the selected search engines; and

aggregating submissions of sponsored community names, member names, and uniform resource locators to optimize registration and visibility and automatically submitting the aggregated submissions to the selected search engines on the selected schedules.

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L14: Entry 3 of 4 File: USPT Dec 18, 2001

DOCUMENT-IDENTIFIER: US 6332135 B1
TITLE: System and method for ordering sample quantities over a network

Abstract Text (1):
A multivariate negotiations engine for ordering sample quantities which: enables a sponsor to create and administer a community between participants such as buyers and sellers having similar interests; allows a buyer/participant to search and evaluate seller information, propose and negotiate orders and counteroffers that include all desired terms, request and order sample quantities, and track activity; allows a seller/participant to use remote authoring templates to create a complete Website for immediate integration and activation in the community, to evaluate proposed buyer orders and counteroffers, and to negotiate multiple variables such as prices, terms, conditions etc., iteratively with a buyer. This also allows buyers and sellers to use and negotiate payment options and methods that are accepted internationally. The system maintains internal databases that contain the history of all transactions in each community, so that sponsors, buyers and sellers may retrieve appropriate records to document each stage of interaction and negotiation. Documents are created by the system during the negotiation process.

Application Filing Date (1):
19981116

Brief Summary Text (5):
Business entities have tried for years to adapt computers and networks for use in sophisticated intercompany negotiations for commercial purchase and sales transactions, but with results that usually fall far short of expectations. Early mainframe computer attempts, for example, usually involved one corporation's allowing its existing suppliers and quantity buyers to connect to its internal private, proprietary network, using specially written locally developed application programs and private, proprietary network connections. These private systems were usually extremely costly to develop and maintain (often costing in the multi-millions of dollars) and very often did not meet all the needs and changing requirements of the participating businesses. Since many corporations had different internal networks and computer systems, considerable effort went into working around incompatibilities. Additionally, these systems had to be based on already existing, close relationships between buyers and sellers and usually were also based on previously negotiated agreements. Thus, the systems did not help in searching for information about new buyers and sellers, nor with the evaluation or negotiation processes, nor with the documenting of those processes from the beginning. They were not interactive, but typically batch processing systems, and usually accepted alphanumeric text only, not the inclusion of graphics or sound files. They usually addressed ongoing relationships previously worked out manually, for which extremely expensive custom systems were developed at buyers' or vendors sites.

Brief Summary Text (7):
With the advent of the Internet and the World Wide Web (Web), the exchange of information amongst companies was greatly enhanced, with the use of Web technologies. However, even with chat rooms, bulletin boards, and forum websites most of this data and information exchange is simply that--not a multivariate

negotiations process nor an online, electronic commerce process.

Brief Summary Text (8):
While some of the Web devices, such as chat rooms and bulletin boards are interactive, each essentially allows two or more people to have conversations over the Internet, in the same way they might speak over the telephone or several might speak over an old-fashioned party line telephone. While the chat room or bulletin board may store these conversations, no other action takes place as a result of the process. Consequently, privacy and security questions aside, these are not effective devices to use to negotiate a number of variable terms, reach agreement on each and document the results. Just as telephone conversations about negotiations can be recorded on tape, but do not produce a contract document on paper, online chat or bulletin board discussions about negotiations cannot easily be used to make a contract on the network, even if they are archived.

Brief Summary Text (9):
Extranet Web technology has been developed to enable a corporation to "talk to" (but not negotiate multiple variables in iterative bargaining with) its suppliers and buyers over the Internet as though the other companies were part of the corporation's internal "intranet." This information exchange is done by using client/server technology, Web browsers, and hypertext technclogy used in the Internet, on an internal basis, as the first step towards creating intranets and then, through them, extranets.

Brief Summary Text (10):
In typical intranet client/server technology, one computer acts as a Web server computer to perform complex tasks, while other, smaller computers or terminals are "clients" that communicate with the Web server. In typical client/server intranets the client requests data and performance of tasks from the Web server computer. A Web server program runs on the Web server computer to provide Web server functions. The communications between these intranet clients and Web servers is in Hypertext, or HyperText Markup Language (HTML)--the "language" of the Internet's World Wide Web.

Brief Summary Text (11):
Usually, for intranets, at the Web server site, one or more people would create documents in hypertext format and make them available at the Web server. In many companies, employees have personal computers or terminals at their desks connected to the internal network. In an "intranet" these employees would use a Web browser on their terminals to see what hypertext documents are available at the internal corporate Web server site.

Brief Summary Text (12):
While this has been an advance for internal communications over a private network, it does not usually provide any interactive, iterative, multivariate negotiations capabilities and it requires personnel familiar with HyperText Markup Language (HTML) to create hypertext links in documents to create and maintain the "internal" Web pages. If a more interactive approach is desired, an Information Technology (IT) specialist in some form of scripting, such as CGI, or PERL is needed who can create forms documents and procedures to allow users to ask for information from the Web server. Again, this is custom programming at the user's site, and still does not provide multivariate negotiations or commerce capabilities.

Brief Summary Text (15):
To date, most attempts at adapting Internet technology to negotiations and commerce, even in small measure, have been focused on solving the problem from inside a corporation's systems going out and with the emphasis on the seller, not the buyer. Consequently, Intranet/Extranet options usually do not provide electronic commerce, only more sophisticated information distribution and sharing.

Brief Summary Text (16):
For corporations that sell at retail, one technique for selling goods over the Internet 04 is shown in FIG. 2b (Prior Art). This scheme uses the concept of a hosting "mall" 24 Website that enables buyers to browse through stores 28 (individual participating selling corporate Websites or aggregated catalog systems) and use a "shopping cart" 26 feature for selecting items to purchase. Participating sellers in a mall 24 create their own Websites which list items for sale and prices. The mall usually provides the shopping cart technique for the buyer to use to select items to buy. Such Internet 04 sales techniques also use security systems for transmitting payments by credit card 30a and 30b or CYBERCASH.TM. payment methods (not shown). Most of these mall Website are significantly limited in the interaction, if any, they allow between buyers and sellers. A few allow limited price negotiations between buyers and sellers, but none allow iterative, multivariate negotiation and bargaining for both price and terms, such as availability, shipping, carrier, payment methods, risk of loss, etc.

Brief Summary Text (17):
Similarly, for non-retail business buyers and sellers, the mall concept above has limited value, since it usually does not connote much about the integrity or capability of the participating businesses, nor provide all of the various payment options a business might want to use. Most of the present Internet and World Wide Web systems for commerce are directed to consumer purchases of retail items in small quantities, not to business to business transactions or consumer transactions negotiating for goods and services in large quantities on national or international terms.

Brief Summary Text (18):
The companies that do provide more of a business to business focus over the Internet usually do so by offering special enterprise application server software 19s, as shown in FIG. 2a (Prior Art) for installation inside an enterprise's private corporate network. These programs fit into a category of software called front-office applications or application servers--so called because they sit close to the user end inside an enterprise and are customized to interface with the back-office applications 21 inside the enterprise, which include commercial products from software suppliers as well as custom developed applications that handle internal business functions such as inventory tracking, financials, human resources and supplies, and similar Enterprise Resource Planning (ERP) systems.

Brief Summary Text (19):
As seen in FIG. 2a (Prior Art), three separate corporations 16a, 16b and 16c are shown using the services of an enterprise commerce site provider 18. Each corporate site 16 has a firewall 16af, 16bf, and 16cf. Firewalls are a combination of hardware and software designed to prevent unwanted intrusion into a private corporate network by unauthorized personnel. A firewall usually puts a specially programmed computer system between its internal network and the Internet. It also prevents the company's internal computer users from gaining direct access to the Internet, since the access to the Internet provided by the firewall computer is usually indirect and performed by software programs known as proxy servers.

Brief Summary Text (20):
Note that, as shown in FIG. 2a (Prior Art), in a typical implementation of an enterprise commerce site provider 18, the enterprise commerce site provider 18 breaks through the firewalls 16af-16cf of each of its customers. Normally this is done in such a way as to provide secure access. Occasionally, if the commerce site provider 18 allows its customers to be linked for certain transactions over the Internet 04, over a common external link 10 to the Internet, internal security may be comprised, if the customer's firewall is configured incorrectly and the Internet transmission results in a breach.

Brief Summary Text (22):

Many, if not most, of the implementations of the enterprise commerce systems shown in FIG. 2B(Prior Art) may also require the corporation to install a special database application server 13h, to run special database application software 13s along with the application server software 19s. Thus, if the corporation already has a Web server computer 20, and the corresponding software 20s, it still has to purchase at least the application server software 19s, possibly an additional computer to act as the application server computer 19h, and possibly yet another combination of database server computer 13h and database server software 13s, in order to use the enterprise commerce provider 18's system. Because application server products 19h and 19s, and possibly additional database server hardware and software as seen in FIG. 2a (Prior Art), have to be installed inside each participating corporation, customized to that corporation's internal back office systems 21, and backed by appropriate internal training support, it can cost in the several hundred thousands or millions of US dollars to purchase and install the systems and train internal people on their use. While a few of these applications connect buyers and sellers over the Internet, usually both the sellers and the buyers must also install and customize the application server software 19s inside their internal networks 14--another reason why these systems are so expensive, difficult to implement and costly to maintain. The traditional approach has been to design systems that will interface with the corporation's own internal computers and systems. Since these vary from one company to another, this is another reason why the application server software 19s can be costly, as extensive modifications to it may be necessary to interface with each customer corporation's own systems.

Brief Summary Text (32):
In addition, obtaining real time card authorization for international transactions online is a major undertaking, because online card processing and bank to bank connectivity does not exist on the Internet in many countries. Also, transactions denominated in most non-G7 currencies are not likely to be processed in real time online because the international banking system is not capable of doing real time, online, Internet currency transactions. Consumers who travel and use credit cards to make payments in other countries, and other currencies, may think these transactions are being handled online, but they are not. Most of the currency exchange processing is done by the connecting banks offline, and most of it that is done electronically is done on private bank and interbank networks.

Brief Summary Text (46):
Obtaining samples from vendors known to the production buyer is significant in itself, as seen above. However, in today's international trade, the overwhelming majority of potential buyers and sellers are not aware of each other's existence. Yet international trade is increasing by double digit numbers each year, so an obvious need exists for more capability. Many countries are taking advantage of the "leapfrog" effect by using the Internet and the latest in information technology (IT) to build instant infrastructures for competing in international commerce. Some countries and trade regions have set up inspection services for potential outside buyers, so that a buyer can obtain an independent assessment of a particular vendor's production facilities from such services. This saves some time and travel expense. However, it still does not provide a buying team with samples for evaluation. With current Internet commerce systems there is no effective way to order such samples. By the time terms and conditions for a sample order have been negotiated manually at such distances, the samples are not likely to be relevant any longer to the buyer company's development goals.

Brief Summary Text (51):
Returning now for a moment to FIG. 2b (Prior Art), as mentioned above, Websites such as retail malls 24 or standalone Websites are used by some corporations which sell at retail. While many tools exist to allow companies to design Websites, there are not as many that allow a company to design one for automatic integration into a Website in a mall or with online catalogs. Since most companies want to maintain control over the appearance of their corporate and brand names, those mall or

catalog sites that do provide Web tools for their business subscribers, usually do not provide complete common interfaces or templates for the companies to use, nor do they integrate the sites with multiple features and services. Instead, they usually only provide access to a shopping cart 26 feature and a secure credit card 30 payment feature with a catalog product and price list that is searchable. Some may also provide manual help to the seller in listing its Website in relevant search engines used on the Internet. Normally, however, it is the seller's responsibility to do so. In either case, the registration with search engines is usually done manually. Some may also require the seller to arrange for payment processing separately, offline. As mentioned before, obtaining a merchant ID can take weeks, thus limiting what the seller can do online until then.

Brief Summary Text (52):
Presently, on the Internet, search engines such as Compaq Corporation's ALTAVISTA.TM., Yahoo corporation's YAHOO.TM. and so on, have different schedules for accepting and adding new sites to their search lists. It can take anywhere from 4-8 weeks or more for a site to be registered with each search engine. Many Internet search engines also add entries to their lists by "spidering" around the Internet to gather all Website addresses. Depending on the search engine, spidering may take much longer or not be as complete as a user requested registration. For example, ALTAVISTA's Website states:

Brief Summary Text (53):
The Altavista search engine starts by spidering your entire site with its spider Scooter. Scooter may take up to three months to spider and index your entire site. It normally spiders about 2 pages per site in any week . . . . Best bet is to submit your pages manually at the rate of no more than 30 per week.

Brief Summary Text (56):
Creating a single Website can take anywhere from 1-8 weeks to 6-8 months or more. Creating one that is able to handle simple electronic commerce transactions may take even longer as merchant accounts for credit cards need to be obtained, integrating CYBERCASH.TM. or similar realtime payment methods must be provided for, search engine registrations need to be requested and so on.

Brief Summary Text (59):
Similarly, the companies that provide Web hosting for a mall 24 on the Internet as shown in FIG. 2b (Prior Art) usually address only retail sales of consumer articles, with little or no control over the individual businesses that subscribe as sellers or the consumers who browse as buyers. In many business transactions, buyers want to know that the sellers meet some minimum standards and requirements and sellers want to know that fraudulent or inappropriate requests will not be tolerated.

Brief Summary Text (61):
The few enterprise electronic commerce providers that go beyond the mall concept do so with the addition of a governor or administrator feature which coordinates with the enterprise application servers. The governor sets up and administers the rules for the site and can act as a broker. This usually entails a customized, specially programmed matching of participating companies' computer systems to coordinate authorization and payment approval so orders flow between firms. However, this technology can cost millions and it can take as much as two years to program the computers and set up the necessary processes and equipment at all the participating company sites. Most of the components for doing this are sold by major computer hardware and software vendors who also sell application server software, hardware, and consulting services to install the "front-end" application server at the participating business's site. Thus, while the Internet may be used to connect the companies participating, most of the work is done by the application server software installed on private, proprietary networks at the various company sites, and the Internet serves as a simple external telecommunications link.

Brief Summary Text (65):
The production purchasing buyer needs to be able to collect information about sellers, and it would help to know that some entity has screened them and monitors them for adherence to some known set of standards and reputability. Additionally, production buyers today usually have to travel to a seller's physical location to get sample products. If the buyer is in the US and the seller is in Malaysia, this might costs thousands of dollars in airfares and travel expenses, just to get samples. Most existing products and services do not help with these tasks. As noted above, samples of newly engineered component parts may be critical for the buyer company's completion of its product. New systems being built by a computer maker may need power supplies or heat dissipation systems that are also new and unproven. The engineers developing the new computer systems need to be able to test their prototypes with sample, new component parts to know the whole system will work. None of the existing methods of buying over the Internet address this kind of need. Most systems are not designed from the buyer's viewpoint.

Brief Summary Text (66):
One system does attempt to address a few things from a buyer's viewpoint. This is the Priceline.com system which is described in U.S. Pat. No. 5,794,207 Method and Apparatus for a Cryptographically Assisted commercial Network System Designed to Facilitate Buyer-driven Conditional Purchase Offers, issued Aug. 11, 1998, to Walker et al., assigned to Walker Asset Management Limited. This is essentially an online bidding process in which a buyer specifies the price it desires to pay for an object, such as an airplane reservation or a car. The bid is submitted over the Internet to a central site which analyzes a database of sellers of that type of item to find one or more selling the object at close to the bid price. These matches or near-matches are presented to the buyer, who can then select from them and place a conditional purchase offer. If the seller accepts, the sale is made. A buyer can initiate another round of bidding if there is no good result from the initial one. While this system has benefits for certain types of purchases, usually of completed, commodity items, it does not address the needs of production buyers outlined above. It does not provide iterative bargaining between the buyer and seller on all aspects of a multivariate transaction, nor does it connote much, if anything about the participating sellers. It is similar to other auction sites on the World Wide Web which allow you to submit bids to a seller or auctioneer, but do not provide the opportunity to bargain interactively with the seller on all the terms. A bid submission process is quite different from a price and terms negotiation process. Bid submission systems are usually designed to assist a seller in disposing of excess inventory. Hence, some malls and enterprise server applications provide limited electronic commerce, but none provide true multivariate negotiation ability.

Brief Summary Text (67):
Finally, both the mall concept and the enterprise server concepts use databases for storing and indexing product and price lists and catalogs, along with final orders.

Brief Summary Text (74):
These and other objects are achieved by a multivariate negotiations engine for ordering sample quantities which: enables a sponsor to create and administer a community between participants such as buyers and sellers having similar interests; allows a buyer/participant to search and evaluate seller information, propose and negotiate orders and counteroffers that include all desired terms, request and order sample quantities, and track activity; allows a seller/participant to use remote authoring templates to create a complete Website for immediate integration and activation in the community, to evaluate proposed buyer orders and counteroffers, and to negotiate multiple variables such as prices, terms, conditions etc., iteratively with a buyer. This also allows buyers and sellers to use and negotiate payment options and methods that are accepted internationally.

The system maintains internal databases that contain the history of all transactions in each community, so that sponsors, buyers and sellers may retrieve appropriate records to document each stage of interaction and negotiation. Documents are created by the system during the negotiation process.

Brief Summary Text (77):
Still another aspect of the present invention is that, in a preferred embodiment, all demographic, payment and negotiation information is transmitted using secure sockets over an open architecture network such as the Internet's Terminal Control Protocol-Internet Protocol (TCP-IP) network, thus eliminating the need for more expensive private leased lines or proprietary networks for the iterative bargaining between buyers and sellers amongst themselves or for communications with the sponsor.

Brief Summary Text (78):
Yet another aspect of the present invention is that the data collected about all transactions is kept in databases in a secure location inside an internet protocol (IP) firewall at the commerce provider's site, thus eliminating the need for additional, expensive database server hardware and database server software and firewall hardware and software at buyer and seller and sponsor sites.

Brief Summary Text (82):
Another aspect of the present invention is that remote authoring templates are integrated with the search and negotiations engines so that a seller in a community can create a Website incorporating its corporate logos and descriptions, while the system automatically integrates products, and other items with the community's promotional and other activities so that the seller can go online immediately.

Brief Summary Paragraph Table (3):
Company/Website Size Average Cost Small $25,000 (online ordering by fax but no transaction or payment processing) Medium $33,000 (online ordering with credit card processing) Large $78,000 (database searches, online ordering, credit card processing)

Drawing Description Text (18):
FIG. 2b (Prior Art) is a block diagram of a prior art Internet mall site.

Drawing Description Text (42):
FIG. 25 is a flow diagram of the present invention's automation of search engine submissions.

Detailed Description Text (3):
In FIG. 1a, a block diagram of the present invention shows a multivariate negotiations engine system 02 communicating over telecommunications link 10a to the Internet 04. A community sponsor 06 is shown also communicating over a telecommunications link 10b to the Internet 04. Participants 08 in this community are shown at 08a-08h. For commercial implementations each participant is either a buyer or a seller (or in some cases, both) in the community. Participants 08 connect to community sponsor 06, through the Internet 04 and multivariate negotiations engine system 02. Multivariate negotiations engine system 02 contains all the software needed to create sponsored communities, communicate with sponsors, and with all participants and store the results. Each sponsor or participant only needs a standard Internet browser such as those commonly available from Netscape Corporation or Microsoft Corporation, among others, and a commonly available desktop computer or other terminal, workstation, or computer to activate the browser over any commonly available link to the Internet. Typically, these browsers are distributed free of charge by their suppliers.

Detailed Description Text (4):
Multivariate negotiations engine system 02 can be used for other types of sponsored

communities where interactive, iterative negotiations of a number of interrelated, variable items amongst the participants over the Internet is desired.

Detailed Description Text (6):
Additionally, while one form of sponsored community addresses corporate buyers and sellers engaged in production purchasing, other commerce communities could be implemented. For example, stock or commodity trading over the Internet might be conducted using the present invention. A sponsor, such as a traditional stock exchange or a newer type of securities body could establish the standards for accepting stockbrokers into the community. Such standards might include compliance with applicable securities regulations and so on. The sponsor can monitor and regulate actual iterative multivariate negotiations such as options, puts, calls, at the market or not at the market, etc., for buying and selling of commodities or securities electronically over the Internet. Or a trade show organizer might sponsor a community for allocating and iteratively negotiating accommodations, placement, footage, signage, facilities, etc., amongst vendors and suppliers at the show site.

Detailed Description Text (9):
Commonly available video conferencing and other multi-media techniques can be added to multivariate negotiations engine system 02. For these embodiments, it is possible that both sponsors and participants would have to add hardware or software for the multi-media features at their sites, if such features are not already present. FIG. 1h illustrates the use of commonly available videoconferencing equipment such as a camera positioned at the top of a monitor connected to a simple desktop computer. With existing videoconferencing products, an image I1 of a participant at another site is displayed on the monitor at the same time the Web browser interface W1 to multivariate negotiations engine system 02 displays a list of the terms being negotiated. Those skilled in the art appreciate that most existing videoconferencing products also include voice communications as well. Thus, the negotiating participants can see and hear each other and the complex, multiple variables they are negotiating at the same time. Multivariate negotiations engine system 02 can archive the multimedia sessions as video and audio files to be stored with the text.

Detailed Description Text (10):
The present invention allows the creation of one or more sponsored communities of any number of types for conducting iterative negotiations over a network. As seen in FIG. 1a, the network used is the present-day Internet with TCP-IP protocols and formats, but those skilled in the art will appreciate that it could also be implemented on any future open network(s) which might replace or supplement the Internet, or it could be implemented inside current, private networks within a corporation, if desired.

Detailed Description Text (11):
Turning now to FIG. 1c, a logical diagram of several different sponsored communities is shown. Sponsored community CA might be a community of farm equipment buyers and sellers, while sponsored community CC might be a community of stockbrokers CC08br and traders CC08tr. Sponsored community CB might include computer manufacturers CB08m and peripheral makers CB08p in a standards community CB. Existing enterprise electronic commerce systems would require each member of such a community to install special Webserver, application server and database server software at each sponsor site, and at all or some participant sites in a community such as sponsored community CC. The present invention, however only requires that each sponsor, and participant in a community have a standard Web browser (not shown here), and a connection to the Internet 04. All of the processing software and hardware needed to handle transactions for each community CA-CC shown here is provided at the multivariate negotiations engine system 02's site.

Detailed Description Text (12):
The above aspect of the present invention is particularly important in business to business negotiations. Use of the Internet architecture helps both sponsors and participants keep their separate brand identifications through their individual URLs and Websites, and the use of http addressing and protocols enables near-instantaneous pulling of text and object files in response to any queries, whether in the same country or around the world.

Detailed Description Text (14):
Now turning to FIG. 1g, the present invention can be viewed as a series of interrelated processes as shown here. For a commercial community, there are seller processes, sponsor processes and buyer processes. Remote authoring 50, is a seller process which enables a registered seller in the community to create a seller Website within the community on which to include the seller's marketing and product information, along with pricing, terms, service offerings and so on. Information generated or created in this remote authoring process 50 is automatically integrated with the community databases and listings. Promotion and brand identifying actions (such as registering the Web page with search engines) are taken automatically on behalf of the seller as well.

Detailed Description Text (15):
Still in FIG. 1g, a seller, once registered and having completed remote Web authoring, can immediately evaluate orders 54 and other inquiries and respond to them. The present invention alerts sellers (and buyers) that a pending offer or counteroffer has been submitted, so that they may return to the system to negotiate or resume negotiations. Finally, another seller process is order activity 58 which allows the seller to follow the activity by e-mail or browser or similar means, and request data downloads or activity reports on transaction data.

Detailed Description Text (16):
The sponsor processes of FIG. 1g include maintaining databases, registering community and seller domain names, and submitting Web uniform resource locators (URLs) to multiple search engines so that both the community Website and each seller Website within it can be found by search engines such as Compaq's ALTAVISTA.TM. among others. Sponsor 96 also monitors activity, collects fees, establishes standards or rules (or both) for the community, and promotes successes. Once a deal is concluded it is archived 68, by multivariate negotiations engine 212 on behalf of seller. The present invention also allows the collection and analysis of direct e-mail demographic information, such as company name, title and location. This data helps the present invention screen out frivolous or fraudulent inquirers. For example, a high school student attempting to propose an order might be intercepted when the present invention determines that no company name or title has been provided and no other authorization for such a request has been provided for.

Detailed Description Text (17):
Buyer processes shown in FIG. 1g include search and evaluate processes 70, which enable a prospective buyer to find companies and their products in the community and investigate their prices, terms and service offerings. If a buyer is interested in opening negotiations with a particular seller, the propose orders processes can be based on catalog prices or desired price and other terms, special orders for samples or small quantities, proposed payment vehicles, and can include information about the buyer. A buyer in this community can use order activity processes 78 to determine an order's status in the system, etc. Note that access to relevant information by each type of community member (sponsor, buyer, seller) is protected by password security and access levels.

Detailed Description Text (18):
Turning now to FIG. 1k participant functions 214 are outlined. In a commerce community, the participants might be grouped as sellers 08grpa and buyers 08grpb. Seller participant 08grpa functions include automatically integrated remote Web

authoring 214-02 and processing and administration 214-04. In remote Web authoring 214-02, the present invention allows a seller registering with the sponsored community, to automatically create a seller's Website within the community, on completion of registration. The seller selects from several Website format templates provided by the present invention and as the seller "fills in the blanks" in a selected template, the information is automatically integrated with the rest of the system, so that orders can be processed and accepted immediately and more efficient registration with search engines is automatically initiated. A seller's processing and administrative steps 214-04 includes such tasks as uploading product catalogs, customizing the Website from time to time, and similar processing.

Detailed Description Text (20):
Next, in FIG. 1L, network functions 207 of the present invention are shown. As mentioned above, most of the functions of multivariate negotiations engine 212 are actually implemented as part of Webserver software 210s. As data is sent to and from the Internet 04 by Webserver 210W, Webserver software 210s interprets the TCP-IP protocol and transfers the contents to multivariate negotiations engine 212's Webserver and dynamic HTML functions 207-02. In one embodiment, these functions cause dynamic HTML text to be created to implement and communicate with the other functions of the present invention. Those skilled in the art will appreciate that Java, Java scripting, XML, or any of a number of other languages could also be used for such communications.

Detailed Description Text (23):
Now turning to FIG. 1n, database functions 222 are shown. First, database functions 222 are able to communicate with all other functions and services of the present invention and vice-versa. For example, as a remote Web authoring 214-02 request is handled by participant functions 214, Webserver software 210s fields the request and communicates it through IP firewall 203f to database functions 222, asking the database server software managing database functions 222 to process the request and return the appropriate information. The database server software performs searches, analysis, and any computations needed to hand back the correct data. Webserver software 210s formats the returned data, and through conventional common gateway interface scripting techniques, creates dynamic HTML (or XML or Java or Java-compatible, etc.) text for ultimate display. This formatted data, in turn, is transmitted to the appropriate sponsor or participants' browsers over the Internet.

Detailed Description Text (27):
Turning to FIG. 1b, multivariate negotiations engine system 02's site contains all the software, hardware and database functions to create and support complete operations of communities. As seen there, the multivariate negotiations engine system 02's Website has a Webserver 210w containing standard Webserver software. In one embodiment the public domain Apache Webserver software is used, but those skilled in the art will appreciate that any of a number of other Webserver software products could be used, such as that provided by Microsoft Corporation's Internet Information Server (IIS) product or Netscape Corporation's Fasttrack or Enterprise Server products or any of several of UNIX.TM. Operating system server software products available from many vendors.

Detailed Description Text (28):
Still in FIG. 1b, Webserver 210w enables communications in the TCP-IP format, to be received from the Internet 04 and forwarded into multivariate negotiations engine system 02's site, which is here shown including server farm 230. Data in these communications is transferred through IP firewall 203f. Those skilled in the art will appreciate that IP firewalls, that is, firewalls such as those supplied by RAPTOR.TM. IP firewalls from Axent Technology Corporation, SOLSTICE 1.TM. and SOLSTICE 2.TM. IP firewalls from Sun Microsystems, Inc., and PIX.TM. Firewalls 510 and 520 from Cisco Systems, Inc. among others, are capable of screening the incoming and outgoing information at all the levels of the TCP-IP OSI 7-layer

model. Thus they provide greater security than simpler router or proxy server firewall approaches. Webserver 210w, also transmits out to Internet 04, when transmissions are sent out from multivariate negotiations engine system 02's site. Thus, the data about negotiations and transactions in a community is kept safe behind IP firewall 203f at multivariate negotiations engine system 02's site. Data is kept secure by IP firewall 203f and communications over the Internet 04 are kept secure by Secure Socket Layer (SSL) encryptions.

Detailed Description Text (32):
Similarly, a seller may wish to use a Website it has previously created at great expense. Multivariate negotiations engine system 02 enables this by providing a customizable scripting language as shown in FIG. 26, and described in more detail below. Using this language, multivariate negotiations engine system 02 helps a seller create a Website which is, in effect, a mirror of the seller's original Website. A seller might choose to place its product catalog there and have the rest of its Website remain external to multivariate negotiations engine system 02's site. Thus, the existing seller external Website retains its existing domain name and URL, is linked to by the present invention as described above, and requests to see the product catalog are linked back to multivariate negotiations engine system 02's site where the product catalog is kept.

Detailed Description Text (35):
FIG. 1i is a flow diagram of the steps of iterative multivariate negotiations engine 212 of the present invention. At step 212-02 an initializing event occurs, such as participant 08 proposing terms to another participant on an initiating terminal (or desktop computer or workstation, etc.) over the Internet 04 through multivariate negotiations engine system 02, thereby creating a communications path which is ultimately directed by multivariate negotiations engine system 02 over the Internet 04 to the destination terminal at which the selected other participant 08 is active. The terms could be the placement of an order from a buyer, or a seller's response to a general request for proposal (RFP), and so on. In initializing step 212-02 multivariate negotiations engine 212 recognizes that these two participants are negotiators and also determines that a deciding entity has been appointed either by the sponsor or by the rules established for this community.

Detailed Description Text (49):
Once the buyer has sent its proposal, the seller is alerted by the system by email (as seen in FIG. 20) that a proposal is available on the system for review and negotiation. In one embodiment, the email notification includes links to multivariate negotiations engine system 02's site. Once the seller (using its browser) becomes aware from the e-mail that a proposal is available it jumps immediately, using the link mentioned above in the email, to view a browser screen such as that shown in FIG. 16, which shows a proposed order with payment by letter of credit from the above buyer. According to the present invention, the seller must still use its user id and password for such viewing, thus preserving security of the data. In this approach, the email notification does not contain any sensitive or confidential data. It serves simply as a notifier. Note that email notices of the present invention do not contain any confidential information. Confidential data is transmitted securely to the browser through SSL techniques. Access to the data is by user name and password.

Detailed Description Text (52):
One of the paradoxes of international trade now is that as today's global economy expands exponentially the number of potential buyers and sellers, it becomes correspondingly difficult for them to find each other and negotiate agreements. The present invention addresses this in a number of ways. First, a sponsored community increases the visibility of member companies which are sellers. The methods described below in connection with functions to promote visibility for the sponsored community and its members significantly increase the likelihood that a buyer, searching for a new supplier over the Internet will find members of such

sponsored communities and that they will be more likely to meet the buyer's needs. For example, trade development communities can be established using the present invention, including as sellers only those that meet the qualifications outlined by the sponsor. This simplifies a prospective buyer's search and evaluation task significantly. The sample order quantity purchasing features (also described in more detail below) of the present invention, significantly reduce the time it takes for a buyer to qualify a new supplier or seller anywhere in the world.

Detailed Description Text (54):
With reference now to FIG. 27, an overview block diagram illustrating the international transaction processing features of the present invention is shown. As seen there, multivariate negotiations engine system 02 is connected over an international network IN, such as the Internet 04. Those skilled in the art appreciate it could also be a proprietary network or virtual private network, if desired. For international processing, sponsored community CC might be a community of sellers of electronic components 08s located in Pacific rim countries. Prospective buyers 08b can be located anywhere in the world, such as Russia, Europe, Africa, South America, North America, and so on.

Detailed Description Text (60):
FIG. 10-1 shows the Web authoring features of the present invention as they are displayed to a participant seller through the sponsor's Web setup area. As can be seen there, Web page buttons, such as general information button 100, home page button 104, and so on, can be selected by the user at its browser to edit or preview a particular part of the website. Thus, the setup area takes advantage of existing web browser technology to simplify the authoring process.

Detailed Description Text (62):
Next, at step 405 in FIG. 4a the seller provides basic information as prompted by the system through a setup screen such as that shown in FIGS. 10-1-10-3. Portions of the demographic information collected there, along with other data collected later is automatically formatted along with the META tags and Meta Keywords for automatic submission to search engines. At step 410 in FIG. 4a, the system presents the community's standard license agreement and terms to the seller. If the seller agrees to the terms at decision block 425, processing continues. If the seller does not agree, the seller may proceed to block 420 to negotiate with sponsor or elect not to participate.

Detailed Description Text (64):
Turning now to FIG. 4b, processing steps for the customization of the seller's Website in the community are shown. At step 455, the seller logs into this part of multivariate negotiations engine system 02 using the username and passwords it selected when entering demographic data in the previous registration steps. At step 460, the seller, having already selected a general template for a Website, selects a customization item from those that are specific to its template. At step 465, the seller is presented with instructions and suggestions as it customizes features using an online form such as that shown in FIGS. 10-1-10-3. Sellers with a small inventory of goods can simply create a product catalog online using the web authoring features of the present invention.

Detailed Description Text (65):
Sellers with existing digital versions of their product catalogs or inventory tracking systems are able to integrate them with the present invention using application programming interfaces (APIs), file transfer protocols (FTP), or extensible markup language (XML), which latter method is in the final stages of becoming a standard language for the Web.

Detailed Description Text (70):
As seen in FIG. 6, the sponsor functions 213-04 are also involved in the remote Web authoring functions 214-02. At step 490, after sponsor determines the seller is in

good standing, sponsor register's seller's company name, products and other data with the community's internal search engine. Next, at step 505, sponsor registers the seller's name with Internet, the corporation established for assigning domain names and URLs. At step 510, sponsor automatically submits seller's name and data to major external search engines on the Internet. At step 515, the sponsor completes the integration of the new seller into the community, enables it for active status, includes it at the top of the list of any vendor databases and allows the seller's Website access to the online community's functions.

Detailed Description Text (71):
Returning to FIG. 1j, another principal sponsor function is promoting visibility 213-04. In this capacity, a sponsor 06 may submit its own Website and URL's to a number of Internet search engines and submit each selling participants' Websites and URL's to such search engines as soon as the seller is registered and has created a Website. A typical sponsor's promote visibility functions 213-04 formats the URL's and domain names (as provided by the system registration forms which are automatically integrated into the system) into the META Tags and Meta Keywords or similar formats and submission schedules most likely to speed up registration with the search engines. For example, the ALTAVISTA.TM. search engine Web site states that:

Detailed Description Text (73):
Since, as noted above, it may take the ALTAVISTA.TM. search engine and others, as many as three months or more to index a site on a purely random basis, submissions such as this can significantly improve the visibility of the new seller Websites from the outset. Automating submissions to them further speeds up this process. In addition, aggregating all of the submissions under the sponsor community hierarchy is likely to generate exponentially more traffic as it takes advantage of the Internet's architecture and search engine indexing capabilities. Traffic, such as inquiries by potential buyers against any of the keywords submitted for the community site will come into the community environment.

Detailed Description Text (75):
Next, at step k2, promote visibility function 213-04 checks to see if it is time to submit the data to a selected search engine n. As noted above, some search engines accept submissions only on a weekly basis, at specified times. If search engine n is not accepting data at this time promote visibility function 213-04 proceeds to step k3 to wait the specified interval. If it is the right time to submit visibility data to search engine n, promote visibility function 213-04 does so at step k4. At step k5 a check is made to see if any more submissions should be made to search engines. If there are several more to process, promote visibility function 213-04 finds the address of the next search engine, which now becomes search engine n, and returns to decision block k2. If it has been determined at step k5 that submissions have been made to all search engines, promote visibility function 213-04 returns at step k6. Those skilled in the art will appreciate that these submission steps can be scheduled to repeat on a regular basis until all of the visibility data for a new participant registrant has been submitted to all the search engines. The present invention also schedules updating submissions on a regular basis to insure most search engines place community sites near the top of their index lists.

Detailed Description Text (86):
Referring briefly to FIG. 2c (Prior Art), it can be seen that the prior methods of ordering sample quantities were heavily labor intensive. A person P1, from the prospective buyer organization would look through a hard copy product catalog, place an order by facsimile or telephone, and possibly fly to the seller's factory, where face to face negotiations might occur with seller's representative P3. Buyer P1 might also have to negotiate by fax and telephone a letter of credit with its bank representative P2, before all price, payment, and other terms are completed so that payment can be arranged to occur upon shipment of the sample quantities. As

noted in the background section above, this traditional approach is usually lengthy, costly and labor-intensive.

Detailed Description Text (87):
Referring now to FIG. 29, the present invention enables a prospective buyer to electronically search a sponsored community site at step SO1 for sellers of goods meeting buyers needs. As mentioned under international transaction processing, above, this ability to find new, possibly pre-qualified suppliers over the internet is a significant advantage for production buyers.

Detailed Description Text (93):
A typical sponsor 06's administrative database DBa, in FIG. 1f, includes such things as templates, procedures, and charges for registering new sellers, procedures for recognizing and assigning passwords to buyers, procedures for automatic renewal, details of each sellers required banking information, and so on. Sponsor 06's vendor database DBb, might be a listing of all the potential vendors in this general market. For example, if the general market for which sponsored community CC was created is the market for power supplies for electronic equipment, then all the makers of power supplies might be included in a brief listing in this database. As a manufacturer of power supplies for this market registers with the sponsor 06, agreeing to meet all the conditions specified for inclusion by sponsor 06, it is automatically placed, by multivariate negotiations engine system 02, at the top of a list of vendors in vendor database DBb. Thus, when potential buyers are browsing through the community Website CC, they will find the registered sellers at the top of vendor database list DBb, with others listed in lower priority order.

Detailed Description Text (96):
With reference now to FIG. 5a, it can be seen that database functions 222 communicate directly with webserver 210s through IP firewall 203f in the present invention. The traditional approach to addressing database concerns over the Internet usually involve a webserver, an application server software product, and a database software server product. As can be seen in FIG. 5a, this embodiment of the present invention does not use an application server software product. Instead the functionality that is needed to receive and transmit information to and from a participant 08, over a communications path through webserver 210s of multivariate negotiations engine system 02 is accomplished by using common gateway interface (CGI) programming such as perl, C++ and Java. Those skilled in the art will appreciate that other scripting and programming languages could be used as well.

Detailed Description Text (97):
As seen in FIG. 5a, CGI programming is used between participant 08's browser software at the participant's site, to handle communications between participant 08 and multivariate negotiations engine system 02's webserver 210s. CGI programming is used to dynamically create Web pages based upon the participant's request.

Detailed Description Text (99):
For example, and still in FIG. 5a, if a buyer participant 08 wishes to place a proposed order, the browser encrypts it at the browser's secure socket layer and webserver 210s decrypts the proposed order upon receipt at multivariate negotiations engine 02's site. Webserver 210s next analyzes the proposed order to understand it and formats into a request sent to database functions 222. In addition to basic read and write functions, database functions 222 shown in FIG. 5a, include operations such as search, analyze, compare, report, sort and relate (between databases.) Formatting can be as simple as "user=username" etc. A request such as "find user=username, return catalog" might be sent through IP firewall 203f. Using object-oriented techniques, the database is ordered more compactly to provide faster search capabilities. Those skilled in the art will appreciate that traditional flat file and relational or other database structures could be used as well.

Current US Cross Reference Classification (1):
705/26

Other Reference Publication (10):
"TRADE'ex Develops Java Compliant Electronic Commerce Solution for Creating Wholesale Markets Over the Internet," Internet Content Report, vol. 1,No. 12, Sep. 1996.

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